



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,500	07/19/2005	Karl-Heinz Keuth	EMK 26379-WO-US	8004
30996 7590 05/21/2007 ROBERT W. BECKER & ASSOCIATES 707 HIGHWAY 333 SUITE B TIJERAS, NM 87059-7507			EXAMINER LE, DAVID D	
			ART UNIT 3681	PAPER NUMBER
			MAIL DATE 05/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,500	KEUTH, KARL-HEINZ	
	Examiner	Art Unit	
	David D. Le	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/27/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/526,500, filed on 19 July 2005. Claims 6-10 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Declaration and Power of Attorney, received on 07/19/05
 - Information Disclosure Statement, received on 04/27/05

Specification

3. The abstract of the disclosure is objected to because it is not presented on a separate sheet. Correction is required. See 37 C.F.R. 1.72.
4. The claims are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Priority

5. It is noted that this application incorporates by reference the disclosure of German priority document 202 13 669.8 filed September 02, 2002 and PCT/DE2003/002896 filed September 02, 2003. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application, not as the last paragraph of the last page of the specification of the instant application.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 6-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 6:

- Lines 7-9 recite, in part, the limitation “an externally toothed sun pinion 19 that, as part of said reduction transmission stage 13, is disposed on said motor shaft 12, which is mounted in motor shaft bearings 25 that are connected to a gearbox 24 of said reduction transmission stage 13”. This claimed limitation appears to be inaccurate because, as shown in the Figure, the sun pinion 19 is mounted to the right of the motor shaft bearings 25, as opposed to in the motor shaft bearings 25.

Art Unit: 3681

- Lines 12-13 recite, in part, the limitation “on opposite sides against said motor shaft bearings and said sun pinion”. It is unclear which opposite sides that the claimed limitation is referring to.

Claim 7:

- Lines 1-2 recite, in part the limitation “wherein said sun pinion 19 is supported directly against said sleeve 26”.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 6-10, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,718,302 to Hasebe et al. in view of U. S. Patent No. 5,533,943 to Ichioka et al.**

Claim 6-10:

Hasebe (i.e., Figs. 2-5; column 6, line 51 – column 10, line 32) discloses a drive train comprising:

- An electric motor (i.e., Fig. 2, element 2);
- A motor drive shaft (i.e., Fig. 2, element 23);

- Wherein the electric motor (2) is disposed on the motor drive shaft (23) (i.e., Fig. 2);
- Drive shafts (i.e., Fig. 2, elements 11) operatively coupled to the motor shaft (23);
- A reduction transmission stage (i.e., Fig. 2, element 3);
- A differential transmission (i.e., Fig. 2, element 4);
- An externally toothed sun pinion (i.e., Fig. 5 element 31);
- Motor shaft bearings (i.e., Fig. 2, element 18) connected to a gearbox (i.e., Fig. 2, element 10) of the reduction transmission stage (3);
- Wherein the motor shaft bearings (18) are embodied as bearings that absorb radial and axial forces (i.e., column 6, line 57);
- A sleeve (i.e., Fig. 2, element 25) disposed between the motor shaft bearings (18) and the sun pinion (31);
- A securing means (i.e., Fig. 5, being the combination of an end of element 41 and an end of element 40) for fixing the sun pinion (31) against the sleeve (25);
- Planet gears (i.e., Fig. 3, elements 33) of the reduction transmission stage (3) meshed with the sun pinion (31);
- Wherein the sun pinion (31) is directly supported against the sleeve (25);
- Wherein a spacer disk (i.e., Fig. 5, element 14) is disposed between the sleeve (25) and the sun pinion (31);
- Wherein the securing means fixes the sun pinion (31) against the sleeve (25) with inherent bias; and

Art Unit: 3681

- Wherein the sun pinion (31) is disposed between the sleeve (25) and the securing means with inherently slight axial play.

Hasebe does not explicitly disclose:

- Wherein the sun pinion (31) and the planet gears (33) are embodied as helical gears having a force component that acts in the direction of the motor shaft bearings (18).

Ichioaka (i.e., Figs. 1-3; column 6, line 19 – column 7, line 45), on the other hand, teaches a planetary gear device wherein the sun gear (14) and the planet gears (20) are embodied as helical gears.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *Hasebe* such that the sun pinion (31) and the planet gears (33) are embodied as helical gears having a force component that acts in the direction of the motor shaft bearings (18), in view of *Ichioaka*, in order to improve the torque transferring capability of the drive train.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3681

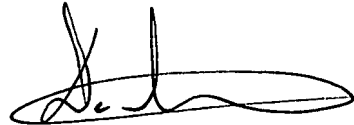
- Janiszewski (U. S. Patent No. 5,620,387) teaches a drive unit for a motor vehicle, as shown in Fig. 2.
- Yoshii et al. (U. S. Patent No. 5,643,127) teaches a vehicle power transmission, as shown in Fig. 1.
- Maeda et al. (U. S. Patent No. 5,637,048) teaches a power train device, as shown in Fig. 2.
- Hasebe et al. (U. S. Patent No. 5,396,968) teaches a drive mechanism, as shown in Fig. 1.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David D. Le
Primary Examiner
Art Unit 3681
05/13/2007

ddl